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ABSTRACT

The trend in the extent of school desegregation in Nashville-Davidson County, Tennessee, through the decade of the 1960's is examined in this report. This trend analysis has import for two reasons. The progress made toward eliminating the old pattern of racially separate school systems is assessed. Thus, the degree of compliance in one city with Federal court policy on school desegregation is examined. Detailed analysis of changes in the racial composition of schools over a period of time, by giving some basis for understanding what has happened in the past, generates a factual basis from which to project probable patterns of future change. Further, this factual base provides some information to guide policy making on and planning for school desegregation. Sections of the report focus on: segregation indexes, racial composition of schools, racial distribution of students patterns of change, tipping points, and unresolved questions. The study's major finding is that segregation in Nashville's schools decreased only slightly during the 1960's. Limited support for the "tipping point" hypothesis is found. However, changes in school composition tend to be in one direction -- toward a higher proportion of Negroes. The study also indicates that metropolitan government has not been the structural panacea for bringing about meaningfully integrated schools. (Author/AM)

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PATTERNS OF

School Desegregation

IN NASHVILLE, 1960 - 1969

A PROJECT OF
THE URBAN OBSERVATORY OF
METROPOLITAN NASHVILLE--UNIVERSITY CENTERS

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PATTERNS OF SCHOOL DESEGREGATION IN NASHVILLE, 1960 - 1969

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THE URBAN OBSERVATORY OF

METROPOLITAN NASHVILLE - UNIVERSITY CENTERS

205 Howard School

Nashville, Tennessee

March 30, 1972

INTRODUCTION

The purpose of this report is to examine the trend in the extent of school desegregation in Nashville-Davidson County through the decade of the 1960's. Such trend analysis has import for at least two reasons. First we will assess the progress made toward eliminating the old pattern of racially separate school systems. We will thus examine the degree of compliance in one city with federal court policy on school desegregation. Second, detailed analysis of changes in the racial composition of schools over a period of time, by giving some basis for understanding what has happened in the past, generates a factual basis from which to project probable patterns of future change. Further, this factual base provides some information to guide policy-making on, and planning for, school desegregation.

The school system of Metropolitan Nashville-Davidson County provides an interesting setting for research on desegregation. Most large cities are surrounded by one or more separate political jurisdictions, usually suburban counties, which have separate school and public service systems, lower tax rates, lower population densities, etc. Outlying suburban areas have tended to experience steady increase in population, due in large measure to the out-migration of middle-class whites from the central cities. The central cities, on the other hand, have experienced steady increases in black population, deterioration of housing and the tax base, etc. While Nashville's population growth has followed this pattern to some extent, it is one of the few cities in the United States with a consolidated Metropolitan government. This means that, during the 1960's, much of the surrounding territory, which in other metropolitan areas would have been a suburban county, was actually part of the city. During the 1960's there has been no separate political jurisdiction to draw the migrating white middle class.

When inner city and suburbs have separate school systems, the metropolitan area often exhibits a very high degree of school segregation, with most inner-city schools being disproportionately nonwhite while most suburban schools are predominantly white. It is seldom possible legally or administratively to achieve desegregation, either by transporting students across suburban boundaries or by redrawing school attendance zones so they will cut across these boundaries.

The absence of political boundaries between urban blacks and suburban whites has structured an opportunity for greater freedom and flexibility in the Metropolitan school system in the pursuit of racial desegregation. We will make some effort to assess the impact of this opportunity on patterns of change in the racial composition of Nashville's schools. To facilitate this assessment, we will present separate analyses for areas which correspond roughly to the old city of Nashville and to the part of Davidson County outside the former city limits.[1] For convenience we will adopt the labels "city" and "county," respectively, for these areas.

Some comment on the meaning of segregation and integration is necessary before we present our analysis. The degree of racial segregation in schools can be assessed in various ways. One might use individual schools as the units of analysis, asking what proportion of them contain children of both races? Or one might want to know what proportion of a given racial group attend schools where they are in the majority. One might also use a statistical index of the degree of "unevenness" in the distribution of non-white and white children. Each approach yields different information about the degree of segregation in the schools. We will use each of them in our assessment of the patterns of segregation in Nashville's schools.[2]

II. SEGREGATION INDEXES

Segregation indexes are designed to measure how evenly, for example, black households are distributed throughout the residential areas of a city. Or, as is our purpose here, one may want to ask how evenly black and white students are distributed throughout the schools of a city system. The meaning of "evenly" is open to debate, though the demographers who have developed the segregation indexes have tended to define "evenly distributed" as meaning, for example, that the proportion of Negro students attending any school should approximate their proportion in the total system (see Taeuber and Taeuber, 1965:206-216). That is, if 25 percent of students in a school system are black, then the percentage of students in each school who are black ought to be about 25 percent.

As Taeuber and Taeuber (1965) point out, a substantial literature has developed in the past 20 years in which a number of indices of the degree of segregation of populations have been proposed and debated. The choice among indices is to some extent arbitrary, though the Taeubers discuss the general criteria that statistical indices should meet and the peculiar properties of each of several widely used indices. The most important of the criteria they mention are that the index should be substantively interpretable and that it should have clearly defined minimum and maximum values. The most widely used index, the one used by the Taeubers in their own study, is the "dissimilarity index."[3] This index - and its variant, the replacement index, which is adjusted for the overall racial composition of the city - will be used in this report.

We will digress briefly to discuss the computation and meaning of these indexes. Let N_i be the number of black students in school i and W_i be the number of white students. Further, let N be the total number of black students in the school system and W be the total number of white students. (N is the sum of the N_i's and W is the sum of the W_i's.) Then the index of dissimilarity is equal to: 1/2(sum over schools of the absolute values of $N_i/N - W_i/W$). In different words, the index of dissimilarity is equal to one half of the sum of the unsigned difference between the proportion of the system's Negroes who attend a given school and the proportion of the system's whites who attend that school. A large value of the dissimilarity index means that the percentage distributions of black and white students across schools are very different. At a maximum, when blacks and whites are

completely segregated, the index will be equal to 1.0. When in every school, the ratio of blacks in the school to all blacks in the school system equals the ratio of whites in the school to all white students in the system, then the dissimilarity index will be equal to 0.0, - i.e., maximum integration. Substantively, the index of dissimilarity can be interpreted to be the proportion of one of the groups which would have to be moved to a school where his race was underrepresented in order to achieve maximum integration. The interpretation of this index assumes that all the population movement involves transfer only of minority group students to other schools. A more "efficient" procedure would be to have minority and majority group members exchange places in school. If for each black student who moves from school B (where blacks are overrepresented) to school A (where whites are overrepresented), a white student moves from school A (or from some other school where whites are overrepresented) to school B, then fewer moves will have to be made to achieve an "even" distribution of black and white students in the schools. The actual proportion of the total school system population which would have to be moved to achieve racial balance is:

$$2xDxPxQ,$$

where D = index of dissimilarity
P = proportion of students who are black
Q = proportion of students who are white
(P = 1.0 - Q)

This, then is an alternative measure of the degree of segregation. Called the "replacement index," it explicitly takes into account the actual proportion of blacks in a city or a school system.[4] Thus, a school system could be highly segregated by the dissimilarity index, but if its proportion of blacks is small, it will have a relatively low replacement index. For a given level of segregation as measured by the dissimilarity index, the replacement index measures how much exchange movement (as opposed to movement of the minority race only) will be needed to achieve racial balance.

In Tables 1 and 2 the values of the dissimilarity index and the replacement index, respectively, are given for several categories of schools and for each of the school years from 1960-61 through 1969-70.[5] The reader will notice that the dissimilarity indexes are substantially higher than the replacement indexes for the same year and category of schools. This is, of course, because the replacement index is equal to the dissimilarity index multiplied by a fraction whose value has an upper limit of .5. (Since P, the proportion of all students who are black is equal to 1.0 - Q, their product has an upper limit of .25. This will occur when one half of all students are white and one half black. In the formula for computing the replacement index (see above), the product of P and Q is itself multiplied by 2, hence: 2(.5) (.5) = .5.

The general pattern in Table 1 is that the index of dissimilarity decreases in magnitude over the decade of the 1960's for each category of schools. The most dramatic change can be seen in county secondary schools. The index of dissimilarity for these schools is 96 in 1964 and 53 in 1965.

The drop is accounted for by the beginning of the phasing out of the only all-Negro secondary school in the old county area. There currently are no secondary schools in the old county which are even majority black.

As measured by the index of dissimilarity--which does not take into account proportion of the population which is black--county secondary schools are currently least segregated, county and city elementary schools are intermediate in degree of segregation, and city secondary schools most segregated. Further, primarily due to the degree of integration of county secondary schools, all county schools are somewhat more integrated than all city schools.

The data in Table 2 show a complementary but somewhat different picture. Computation of the replacement index essentially adjusts the dissimilarity index for the proportion of the population which is of the minority group. For a given level of segregation, the smaller the proportion of the total population that is, for example, black, the "easier," in the sense of total amount of movement required, it will be to bring about racial balance. Thus, though the city and county elementary schools are about equally segregated (by the dissimilarity indexes), comparing their replacement indexes for each of the years reveals that those for the city elementary schools are substantially higher. The reason for this is, as mentioned previously, that black students constitute only 9 percent of the school population in the county while they make up 54 percent of the population of schools serving the old city area.

One additional point must be made regarding the replacement index. Since it is a function of both the dissimilarity index and the proportion of the school population in the minority racial group, these two factors can influence the magnitude of the replacement index in the same or opposite directions. If over time, the index of dissimilarity is decreasing, while at the same time the proportion of blacks in the population is increasing, then the replacement index will have one force tending to contribute to higher values and another tending to contribute to lower values. This is what accounts for the relative stability in the values of the replacement index. Over the decade of the 1960's the dissimilarity indexes measuring the extent of segregation have tended toward lower values - desegregation has been occurring to some degree. On the other hand, the proportion of blacks in the school population has been increasing (from about 20 percent in 1960 to about 25 percent in 1969). This increase has, of course, been greater in the inner city area. These two factors have cancelled each other out in some categories of schools.

III. RACIAL COMPOSITION OF SCHOOLS

We turn now to a somewhat different perspective on segregation and integration. This perspective focuses on the schools rather than on the distribution of pupils per se. In this section we will examine the extent to which school buildings are desegregated, considering three categories of segregation: all-white and all-black schools, schools with 10 percent or fewer students of either race, and schools with 20 percent or fewer of either race.

Considerable progress has been made in eliminating all-black and all-white schools. The number of all-black schools has been reduced from 22 to 11 (from 17 percent of the schools in existence in 1960 to 8 percent of those open in 1969). All-white schools made up 69 percent of the system in 1960; this fell to 18 percent of the 1969 schools. Thus, all-black schools have been reduced by about half, and all-white schools have been reduced by almost three-fourths. The most notable progress was made in the secondary schools: in 1960, 87 percent (26 of 30 schools) were all-white, but by 1969 there were no all-white secondary schools. The latter pattern is probably the result of the fact that high schools serve larger attendance zones than elementary schools and, hence, are more likely to include diverse ethnic residential areas. (The data presented in this paragraph and the one which follows are not given elsewhere in tables.)

The progress alluded to above may be somewhat superficial. If we look at the number of schools which are over 90 percent Negro or over 90 percent white, it becomes clear that many schools are still not desegregated to any substantial degree. Overall, the number of "segregated Negro" schools by this criterion declined from 22 of 130 schools in 1960 to 19 of 139 schools in 1969; "segregated white" schools declined from 107 of 130 schools in 1960 to 90 of 139 schools in 1969. The number of segregated Negro secondary schools actually increased from 4 to 6 during this time interval.

If a more stringent criterion of segregation is used, that a school with 80 percent or more Negro students be considered segregated, then there is almost no change between 1960 and 1969 in the number of desegregated schools. By this criterion there were 22 segregated Negro schools in 1960 and 23 in 1969. (It is not appropriate to define segregated white schools as having 80 percent or more whites, since under conditions of even distributions of white and Negro students schools would be expected to have about 76 percent white students.)

Another way to look at these data is to see what progress has been made in the number and proportion of integrated schools (See Table 3). An integrated school will be defined as a school with 21 to 89 percent white students. This may seem both odd in itself and inconsistent with the procedure in the preceding paragraphs, since the parameters are not symmetrical with respect to a midpoint of 50 percent. However, as noted, the school system as a whole is about 76 percent white, 24 percent black; it is inappropriate to use a criterion which assumes the ideal desegregated school to be composed of 50 percent of each race. Further, using 21 and 79 percent as the parameters would define schools which are 80 percent white and 20 percent black as segregated schools. This is clearly unrealistic. Admittedly, the definition of integration we are using is not perfect; but it is the best we can do using this procedure and technology. This problem points up the need for a measure of segregation which would, like the dissimilarity and replacement indexes, be based on the relative proportions of the races in the population being studied, but which would provide an appropriate set of parameters for classifying individual schools as segregated or integrated.

By this criterion of integration (21-89 percent white), although there has been considerable progress, the proportion of integrated schools is still fairly low--19 percent in 1969. There is little difference between secondary and elementary schools in this respect. However, the proportion of schools which are integrated--elementary and secondary--is higher in the old city than in the old county.

This does not necessarily indicate that the city schools are more integrated than the county schools. (The dissimilarity indexes indicate just the opposite, though most of the greater integration of county schools is accounted for by the secondary schools.) More probably it reflects the higher proportion of blacks in the city schools--54 percent as against about 9 percent in the old county area. In fact, if black students in the county were equally distributed among all the county schools, all the county schools would be segregated white by our criterion of integration, since whites make up 91 percent of the county school population. However, a substantial amount of uneven distribution of whites and blacks could occur in the schools serving the central city without necessarily causing any school to be less than 21 percent or more than 89 percent white.

The importance of overall racial composition just alluded to above can be further seen in comparing the replacement indexes given in Table 2. (This material was discussed in an earlier section.) The degree of segregation of blacks and whites (as measured by the dissimilarity index) is somewhat less in the county area than in the city. The replacement index--which measures the proportion of the population of the school system that would have to be moved if black and white students exchanged places on a one-to-one basis--is much lower for the county schools than for the city schools. It would be much "easier" to integrate the schools in the county area. The discussion of the previous paragraph and this paragraph again bring to fore the difficulties in using a segregation measure that is not based on the composition of the population being measured--even an asymmetrical criterion such as we used above.

IV. RACIAL DISTRIBUTION OF STUDENTS

In 1960, 99 percent of the school system's white students attended schools which were at least 90 percent white; 99 percent of the Negro students attended schools which were at least 80 percent Negro (see Table 4).[7] (Again, we use asymmetrical criteria because of the relatively greater proportion of whites in the system.) The corresponding figures for 1969 are 83 percent and 71 percent; although there has been significant progress, most students still attend segregated schools.

There are considerable differences between city and county with respect to the distribution of students. A considerable higher percent of white students attend segregated (90 percent or more) white schools in the county than in the city--92 percent versus 65 percent (secondary) and 89 percent versus 58 percent (elementary). On the other hand, no Negro students attend

segregated (80 percent or more) Negro secondary schools in the county, compared with 83 percent in the city. (There is much less difference between city and county elementary schools in this respect.) This difference is undoubtedly due at least partly to the much higher proportion of Negroes in the city schools; in fact, 50 percent of the Negro secondary students in the county attend segregated (90 percent or more) white schools. (The proportion of whites attending segregated Negro schools is negligible in all categories.)

V. PATTERNS OF CHANGE

Another perspective on desegregation is to look at patterns of change in school integration status and not just aggregate figures. A breakdown of types of change is given in Table 5. For example, in the first column, there were 36 shifts of schools from segregated white to desegregated. Of these, 27 were schools that were segregated white in 1960 and desegregated in 1969 (with desegregation defined as 11 percent white to 89 percent white, unlike the criterion in the previous sections). One new school opened as a segregated white school and was later desegregated, and one school was desegregated and later discontinued. Four schools went from segregated white to desegregated to segregated Negro; three desegregated, then returned to segregated white status. The rest of the table is read similarly. Of the 45 shifts recorded, 39 (87 percent) were permanent, and 33 (84 percent) of the permanent shifts were increases in proportion Negro.

Only four schools have changed permanently from desegregated to segregated Negro in the ten-year period. This type of resegregation is generally viewed as a more serious problem than our figures indicate. Walker et al. (1967) found nineteen such cases in their Baltimore study, in a system with slightly fewer schools but a much higher proportion of Negroes than the Metropolitan Nashville system. However, closer examination of their data shows the schools which were already desegregated at the beginning of their eleven-year study period were much more likely to resegregate than those which were segregated white at the beginning. In other words, it takes time for schools to resegregate since school attendance is based on slowly-changing residential patterns, and the schools which were already desegregated had a head start. In Nashville, there was only one desegregated school at the beginning of the study period[8] compared with 15 in Baltimore--of which nine had resegregated by the end of the eleven-year period. This suggests that Nashville might have a more serious resegregation problem than Table 5 would indicate, but that it has not yet had time to become apparent. Examination of the present status of desegregated schools tends to confirm this suspicion (see Table 6): there is a clear tendency for the schools which have been desegregated longest to have the fewest white students--much fewer, proportionally, than their representation in the school system population. (The five schools which desegregated before 1965 are all less than half white now).

One more perspective on desegregation is presented in Table 7. Of the schools operating in 1960 and 1969, almost all of the schools which were desegregated in 1969 were segregated white in 1960; but two-thirds of the

schools which began as segregated white schools were still segregated white in 1969. Of the 15 schools which were segregated Negro in 1960, only one has become desegregated.

VI. TIPPING POINTS

The concept of the "tipping point" has been invoked in connection with racial change both in residential patterns and in school attendance. It usually refers to the belief that whites will flee a school or neighborhood when the proportion of Negroes reaches a certain level. Thus the replacement of whites by Negroes will be accelerated after the tipping point is reached, according to this argument.

If there is a tipping point for school attendance, the percentage increase of Negro students should rise sharply when the tipping point is reached. To test this hypothesis, Stinchcombe et al. (1969) employed a procedure based on moving averages, which we have replicated for Nashville. For each year, all schools whose proportion of Negro students fell within a certain ten-percentage point interval were classed as "near" the midpoint of that interval. The percentage change in Negro enrollment between that year and the next was computed for each school. An average percentage change for all years was then computed for each interval. (See Table 8) Thus, for all schools "near" 35 percent Negro (i.e. between 30 and 40 percent Negro), the following year's proportion of Negro students showed an average increase of 13.0 percent.

Some suggestion of the existence of a tipping point for elementary schools in the county can be seen in Table 8. The rate of increase in proportion Negro rises from 2.2 percent for schools with 15 percent Negro students to 13.8 percent for schools with 20 percent Negro. Elementary schools in the city show no such sharp rise in the rate of increase. There is a much smoother increase from 10 percent to 35 percent. The pattern for secondary schools also shows a smoother increase, from 10 percent to 30 percent. (These data are not broken down by location because there are so few secondary schools. Data based on such small numbers of cases would not be reliable.)

Our findings for city elementary schools are consistent with those of Stinchcombe et al. (1969); unfortunately, since they present no data from the suburban areas around Baltimore, our other findings cannot be compared with theirs.

No conclusions can be drawn about neighborhood integration from data on school attendance. Although school attendance is based on residential patterns, the school data allow inference only of the residential patterns of families with children in the public schools. Families without school-age children, or families whose children attend private schools, might exhibit quite different residential patterns.

VII. UNRESOLVED QUESTIONS

The data we have presented raise two important questions without resolving them. The first is to what extent the school authorities have been pursuing school consolidation as a tactic against segregation. A policy of combining small attendance zones into large ones would tend to promote racial integration because of the greater likelihood that larger zones would incorporate diverse residential areas rather than a single neighborhood.

The average size of Metro schools increased 17.8 percent over the ten-year period, from 581.6 students to 685.0 students. (See Table 9)

The rate of growth was higher in the county than in the city for elementary schools--in fact, the average size of city elementary schools decreased 3.2 percent over the ten years. There was little difference between the rates of increase of county and city secondary schools. Throughout the period, city elementary schools were larger than county elementary schools (although the gap is narrowing); but county secondary schools were larger than city secondary schools. (This may reflect a greater willingness to bus older students long distances.)

From these aggregate figures alone it is impossible to evaluate the school system's use of consolidation as a tactic against segregation. The increases in average size of schools could reflect either a conscious policy of seeking larger schools, or it could mean a lack of funds for new facilities desired by the school authorities, or an underestimate by authorities of the growth rate of the system. To resolve this question would require an investigation of school board policy and long-term planning regarding both new construction and additions to existing facilities.

A related question is the result of changes in school attendance zones, including openings and closings of schools as well as redistricting. When we excluded those schools that were newly opened during the period of the study, and then calculated dissimilarity and replacement indexes for the remaining group, we found no important difference between those indexes and the indexes for the whole system. However, there were only 18 such cases over ten years in a system which had 139 schools in 1969. Any effects the opening (or closing) of a few schools might have had on segregation would probably be lost in such an aggregate measure. Furthermore, examining only the particular schools which opened or closed is misleading, because such changes are reflected in changes in the boundaries of surrounding school districts. A better approach to this question would be, for each boundary change, to analyze all the schools involved in the change, computing segregation indexes for that group of schools both before and after the change. This procedure should produce a reasonable estimate of the consequences for desegregation of each boundary change.

VIII. SUMMARY

Our major finding is that segregation in Nashville's schools decreased only slightly during the 1960's. There was considerable progress in eliminating all-white and all-black schools. However, relatively few (under 20 percent) schools were meaningfully integrated (21 to 89 percent white) at the end of the decade. Most white students still attended segregated white schools; the picture seems brighter for Negro students largely because of their scarcity in the county.

We found only limited support for the "tipping point" hypothesis. However, changes in school composition tended to be in one direction - toward a higher proportion of Negroes. We consider this as pointing toward a pattern of possible resegregation. This is reinforced by the data in Table 6 which show a pattern of higher average percentage Negro students the longer schools have been integrated.

This pattern has direct relevance to planning for schools and for housing in Nashville and other cities. Since school attendance zones have been based on residential neighborhoods (and even acknowledging some changes in the 1960's in attendance zones), it seems clear that most of the school integration has occurred as a result of changing racial composition of residential areas. (This does not hold for old county area secondary schools, where the one majority black high school has been closed, one would have to assume by administrative design.) If one assumes that increasing "ghettoization" of the inner city is not desirable, and that increased desegration of schools is desirable, then either school attendance must be divorced from residential patterns or else stable racial integration of housing must become an issue of substantial concern to political and lay leaders.

One effort to break the strict dependence of school racial composition on neighborhood racial composition is the recent Federal district court decree ordering substantial additional busing of children to achieve racial balance. (It is, perhaps, ironic to note that the controversial court decision to order cross-town busing could not have been so extensive in its coverage were it not for the existence of the consolidated Metropolitan government. A substantial majority of the white middle-class children would have been "safely" beyond the political jurisdiction of the inner city school system.) This clearly has not been a popular strategy.

It would seem that Metropolitan government has not been the structural panacea for bringing about meaningfully integrated schools. It is not entirely clear that it could have been.

FOOTNOTES

1. Areas which correspond approximately to these former civil divisions are the Urban Services District and the General Services District, respectively. Tax rates, fire and police protection, and sewer and water service differentiate these areas to some degree. We adopt the labels "City" and "County" as a convenience for differentiating these areas. These labels are adopted purely as an expedient in referencing the areas and their use is not necessarily intended to imply any politically meaningful division.

2. This procedure was first used by Stinchcombe et al. (1968).

3. See the discussion by the Taeubers of the various indexes and their reasons for choosing the index of displacement for their study. They devote a 50 page appendix to a discussion of issues and methods of measuring segregation. See Taeuber and Taeuber (1965:195-245). The substantive meaning of this index is discussed below.

4. The replacement index was suggested by Duncan. See Taeuber and Taeuber, 1965 p. 30.

5. As was mentioned earlier, our results are divided by old "city" and "county" schools. Schools in existence in 1960 (which was prior to Metropolitan consolidation), are classified according to whether they were in the old city or county jurisdictions. Schools which have opened since Metropolitan government are classified on the basis of whether the plant itself is located within the area defined by the former city limits. Thus, for both old and new schools classification as city or county is derived from facility location. This does not mean that the pupils attending a city school necessarily live in the area of the old city, however. Schools located near the border of the old city frequently have attendance zone which cover territory from both former jurisdictions. A further word of caution is necessary regarding our classification scheme for schools. Nashville does not have schools of uniform size and grade structure. The predominant pattern is a grouping of grades 1 - 6, 7 - 9, and 10 - 12. Many exceptions exist, however. Three schools have grades 1 - 9, several have grades 7 - 12, and a number of other such non-standard combinations exist. Arbitrary decisions have been made in classifying schools as elementary or secondary. Grades 1 - 6 are classified as elementary, and grades 7 - 12 are classified as secondary. Where grades 7 - 9 occur in combination with grades 1 - 6, they are called elementary, where grades 7 - 9 occur in combination with 9 - 12, they are called secondary.

6. It should be noted that the number of schools in the system has changed from year to year. In 1960, 130 schools were operated by the city and county boards. (Metropolitan consolidation did not take place until three years later.) By 1969-70 the number of schools operated by the Metropolitan Board of Education was 139.

7. We present only data for 1960 and 1969 in Table 4 for the sake of saving space. The trends for intermediate years are uniformly consistent with the trend implied by the difference between 1960 and 1969. For example, looking at the top panel of Table 4, we see that in 1960, 99 percent of all white students attended schools which were 90 to 100 percent white. In 1969, 83 percent of white students were in such schools. The pattern for the intermediate years is a monotone decreasing percentage trend.

8. This school has gone from 86 percent white to 27 percent white.

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TABLE 1

EXTENT OF SCHOOLS SEGREGATION AS MEASURED BY THE INDEX OF DISSIMILARITY FOR THE SCHOOLS OF NASHVILLE DAVIDSON COUNTY, TENNESSEE BY TYPE OF SCHOOL, 1960-69[a]

Year	All Schools	All Secndry Schools	County Secndry Schools	City Secndry Schools	All Elmntry Schools	County Elmntry Schools	City Elmntry Schools	All County Schools	All City Schools
1960	99	100	100	100	98	98	98	98	99
1961	98	100	100	100	97	97	97	98	98
1962	97	100	100	100	96	96	96	97	97
1963	96	99	98	99	94	94	94	95	96
1964	94	97	96	95	93	93	90	94	92
1965	91	92	53	90	90	85	87	81	88
1966	87	88	45	89	86	81	81	75	84
1967	83	80	44	87	85	77	77	68	82
1968	82	77	47	86	85	79	78	70	83
1969	80	75	51	81	84	76	77	68	81

[a] See the text for an explanation of the dissimilarity index and footnote 5 for an explanation of the category system for schools. The values of the index are multiplied by 100 to simplify presentation.

TABLE 2

THE EXTENT OF SCHOOL RACIAL SEGREGATION AS MEASURED BY THE REPLACEMENT INDEX FOR THE SCHOOLS OF NASHVILLE DAVIDSON COUNTY, TENNESSEE BY TYPE OF SCHOOL, 1960-69[a]

Year	All Schools	All Secndry Schools	County Secndry Schools	City Secndry Schools	All Elmntry Schools	County Elmntry Schools	City Elmntry Schools	All County Schools	All City Schools
1960	32	27	7	46	34	14	49	12	48
1961	32	27	7	47	34	14	49	12	48
1962	32	28	7	47	34	15	48	12	48
1963	32	29	7	48	34	15	47	12	47
1964	32	28	6	46	34	15	45	12	46
1965	32	27	1	45	34	16	43	11	44
1966	31	27	2	44	32	15	41	10	42
1967	30	26	3	44	33	15	37	10	41
1968	31	25	5	43	35	19	37	13	41
1969	29	24	6	41	33	16	37	12	40

[a]See the text for an explanation of the replacement index and footnote 5 for an explanation of the category system for schools. The values of the index are multiplied by 100 to simplify presentation.

TABLE 3

THE PERCENTAGE OF NASHVILLE-DAVIDSON COUNTY SCHOOLS CLASSIFIED AS INTEGRATED (21-89% WHITE) BY TYPE OF SCHOOL AND YEAR

Year	All Schools	All Secndry Schools	County Secndry Schools	City Secndry Schools	All Elmntry Schools	County Elmntry Schools	City Elmntry Schools
1960	1% (130)[a]	0% (30)	0% (17)	0% (13)	1% (100)	0% (70)	3% (30)
1961	2 (132)	0 (31)	0 (18)	0 (13)	3 (101)	1 (71)	7 (30)
1962	4 (136)	0 (31)	0 (18)	0 (13)	5 (105)	1 (75)	13 (30)
1963	5 (140)	0 (34)	0 (19)	0 (15)	7 (106)	3 (76)	17 (30)
1964	6 (142)	3 (35)	0 (20)	7 (15)	7 (107)	3 (77)	17 (30)
1965	9 (140)	6 (34)	0 (19)	13 (15)	10 (106)	5 (76)	23 (30)
1966	14 (138)	9 (34)	0 (20)	21 (14)	15 (104)	11 (75)	28 (29)
1967	17 (139)	14 (39)	9 (23)	21 (14)	18 (102)	12 (73)	31 (29)
1968	17 (139)	16 (37)	13 (23)	21 (14)	17 (102)	10 (73)	35 (29)
1969	19 (139)	16 (38)	13 (23)	20 (15)	20 (102)	13 (72	38 (29)

[a]Numbers in parentheses are the base of the percentage above them

TABLE 4

THE PERCENTAGES OF BLACK AND OF WHITE STUDENTS ATTENDING SEGREGATED WHITE, INTEGRATED, OR SEGREGATED BLACK SCHOOLS FOR 1960 AND 1969[a]

Year	All Schools	All Secondary Schools	County Secondary Schools	City Secondary Schools	All Elementary Schools	County Elementary Schools	City Elementary Schools
WHITE STUDENTS IN SCHOOLS 90% TO 100% WHITE (SEGREGATED WHITE SCHOOLS)							
1960	99.6%	100.0%	100.0%	100.0%	99.3%	100.0%	96.9%
1969	83.3	84.3	9[illegible].1	65.1	82.8	89.1	57.5
WHITE STUDENTS IN SCHOOLS 21% TO 89% WHITE (INTEGRATED SCHOOLS)							
1960	0.4	0.0	0.0	0.0	0.7	0.0	3.1
1969	15.7	15.3	7.6	33.4	16.1	10.1	39.9
NEGRO STUDENTS IN SCHOOLS 0% TO 20% WHITE (SEGREGATED BLACK SCHOOLS)							
1960	98.8	100.0	100.0	100.0	98.3	98.5	98.3
1969	70.6	67.7	0.0	80.3	71.3	67.2	73.6
NEGRO STUDENTS IN SCHOOLS 21% TO 89% WHITE (INTEGRATED WHITE SCHOOLS)							
1960	0.3	0.0	0.0	0.0	0.5	0.0	0.6
1969	22.4	21.4	49.8	16.0	24.0	18.4	26.1
NEGRO STUDENTS IN SCHOOLS 90% TO 100% WHITE (SEGREGATED WHITE SCHOOLS)							
1960	0.9	0.0	0.0	0.0	1.2	1.5	1.2
1969	7.0	11.1	50.2	3.7	4.7	12.4	0.4

[a]Less than 1% of all white students attended segregated black schools in any year; therefore, no separate data are presented for white students in these schools.

TABLE 5

SUMMARY OF ANNUAL SHIFTS IN SEGREGATION STATUS OF SCHOOLS, 1960 - 1969

	Total Schools Shifting from "Segregated" to "Desegregated"		Total Schools Shifting from "Desegregated" to "Segregated"	
	White to Deseg.	Black to Deseg.	Deseg. to White	Deseg. to Black
Total Shifts	36	2	3	4
Of the Total:				
Net Shifts, Old Schools	27	1		
Shifts of New Schools or Closed Schools	2	1		
Net Shifts from Seg. White to Seg. Non-White	4			4
Multiple Shifts not included in net figures	3		3	

TABLE 6

1969 RACIAL COMPOSITION OF SCHOOLS WHICH BECAME DESEGREGATED IN THE YEARS BETWEEN 1961 AND 1969

Year Desegregated	School Ident. Number	Percent White, 1969	Mean Percent White for Schools Desegregating in Given Year
1961	83	11%	
	45	39	24%
	46	22	
1962	52	39	39
1963	77	40	40
1964	-	-	-
1965	106	89	
	17	15	60
	28	76	
	50	61	
1966	74	18	55
	78	78	
	70	62	
	6	89	
	30	65	
	84	66	
1967	42	66	76
	76	81	
	112	65	
	124	87	
	129	87	
	102	82	
1968	66	89	82
	139	75	
	12	89	
	85	89	
1969	128	83	87
	5	89	
	87	87	

TABLE 7

PATTERNS OF CHANGE IN METROPOLITAN SCHOOLS 1960-1969

		1960		
		Seg. Black	Deseg.	Seg. White
1969	Seg. Black	14	0	4
	Deseg.	1	1	27
	Seg. White	0	0	70
		15	1	101

The 117 schools in this table are those which were open in both 1960 and 1969 and were not radically restructured in the interim. A number of schools opened or closed during this period, and several were combined or divided- e.g. Haynes High School and Haynes Elementary School, which were combined after the 1964-65 school year. These schools are not included in the figures above.

TABLE 8

AVERAGE ANNUAL PERCENT INCREASE IN PROPORTION NEGRO FOR SCHOOLS WITH A GIVEN PROPORTION NEGRO

%Negro (Midpoint of Interval)	All Schools		All Secondary Schools		All Elementary Schools	
	Avg. Change in %Negro the Next Year	Number of School Years	Avg. Change in %Negro the Next Year	Number of School Years	Avg. Change in %Negro the Next Year	Number of School Years
5	0.7	934	0.9	241	0.6	693
10	3.6	97	4.7	26	3.2	71
15	5.0	47	5.3	10	4.9	37
20	10.3	24	8.8	5	10.7	19
25	12.6	20	12.2	4	12.7	16
30	13.2	13	15.2	4	12.3	9
35	13.0	14	13.7	3	12.8	11
40	10.7	13	11.2	2	10.6	11
45	13.6	11	20.8	1	12.9	10
50	8.0	11	20.8	1	6.7	10
55	7.1	11	25.9	1	5.2	10
60	8.7	12	20.2	2	6.4	10
65	11.1	9	14.5	1	10.7	8
70	8.8	5	14.5	1	7.4	4
75	2.4	8	10.5	1	1.2	7
80	1.9	10	5.3	3	0.4	7
85	2.5	9	3.8	4	1.4	5
90	-0.3	8	-1.6	3	-1.5	5
95	-0.2	180	-0.0	38	-0.3	142

TABLE 8 (Cont'd)

AVERAGE ANNUAL PERCENT INCREASE IN PROPORTION NEGRO FOR SCHOOLS WITH A GIVEN PROPORTION NEGRO

%Negro (Midpoint of Interval)	All City Schools		All County Schools		City Elementary Schools		County Elementary Schools	
	Avg. Change in %Negro the Next Year	Number of School Years	Avg. Change in %Negro the Next Year	Number of School Years	Avg. Change in %Negro the Next Year	Number of School Years	Avg. Change in %Negro the Next Year	Number of School Years
5	1.5	193	0.5	741	1.4	118	0.5	575
10	8.5	28	1.6	69	7.9	19	1.5	52
15	8.1	21	2.5	26	8.5	16	2.2	21
20	9.1	13	11.7	11	8.5	11	13.8	8
25	9.7	12	16.9	8	8.6	9	17.9	7
30	13.6	10	11.9	3	12.1	7	13.0	2
35	14.0	9	11.2	5	14.1	6	11.2	5
40	10.4	8	11.0	5	10.2	6	11.0	5
45	11.3	8	19.6	3	10.0	7	19.7	3
50	7.8	10	9.2	1	6.4	9	9.2	1
55	6.9	8	7.5	3	4.2	7	7.5	3
60	9.1	9	7.5	3	6.0	7	7.5	3
65	10.3	8	18.2	1	9.6	7	18.2	1
70	8.8	5	0.0	0	7.4	4	0.0	0
75	6.9	5	-5.1	3	6.0	4	-5.1	3
80	6.4	5	-2.6	5	7.9	2	-2.6	5
85	4.2	6	-1.0	3	5.0	2	-1.0	3
90	2.1	4	-2.6	4	3.3	1	-2.6	4
95	0.2	129	-0.4	51	-0.2	95	-0.4	47

TABLE 9

PERCENT CHANGE IN AVERAGE SIZE OF SCHOOLS, 1960-1969

	Average Number of Students per School		
	1960	1969	%Change
All Schools	581.6	685.0	+17.8%
All County	545.4	675.7	23 9
All City	654.9	705.2	7.7
County Elementary	443.8	527.2	18.8
City Elementary	585.4	566.9	-3.2
County Secondary	969.1	1140.5	18.3
City Secondary	815.2	972.6	19.3